

WHAT IS CLAIMED IS

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1. An electronic device which receives image data, and converts the image data for outputting therefrom, comprising:

a plurality of conversion units configured 10 to convert the image data;

a control unit configured to control said conversion units;

an image data transfer unit configured to transfer the image data between said control unit 15 and at least one of said conversion units; and

a clock unit configured to provide synchronization between said control unit and at least one of said conversion units for transfer of the image data.

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2. The electronic device as claimed in 25 claim 1, wherein said control unit supplies to one

of said conversion units a signal indicative of a start of transfer of the image data when transferring the image data to the one of said conversion units.

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3. The electronic apparatus as claimed in
10 claim 1, wherein said control unit supplies to one of said conversion units a signal indicating that the image data being transferred is a sub-scan portion when the sub-scan portion of the image data is being transferred to the one of said conversion
15 units.

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4. The electronic apparatus as claimed in
claim 1, wherein said control unit supplies to one of said conversion units a signal indicating that the image data being transferred is a main-scan portion when the main-scan portion of the image data
25 is being transferred to the one of said conversion

units.

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5. The electronic device as claimed in
claim 1, wherein one of said conversion units
supplies to said control unit a signal indicative of
a start of transfer of the converted image data when
10 transferring the converted image data to said
control unit.

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6. The electronic apparatus as claimed in
claim 1, wherein one of said conversion units
supplies to said control unit a signal indicating
that the image data being transferred is a sub-scan
20 portion when the sub-scan portion of the converted
image data is being transferred to said control unit.

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7. The electronic apparatus as claimed in
claim 1, wherein one of said conversion units
supplies to said control unit a signal indicating
that the image data being transferred is a main-scan
5 portion when the main-scan portion of the converted
image data is being transferred to said control unit.

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8. The electronic device as claimed in
claim 1, wherein at least one of said conversion
units further includes an interruption unit
configured to output an interruption signal to said
15 control unit.

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9. The electronic device as claimed in
claim 8, wherein said interruption unit outputs the
interruption signal in response to a completion of
conversion of image data that is equal to a
predetermined amount.

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10. The electronic device as claimed in
5 claim 8, wherein said interruption unit outputs the
interruption signal in response to a completion of
conversion of image data that is equal in amount to
one page of a print sheet.

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11. The electronic device as claimed in
claim 8, wherein said interruption unit outputs the
15 interruption signal in response to an error
occurring during the conversion of the image data.

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12. The electronic device as claimed in
claim 1, wherein said control unit makes one of said
conversion units convert the image data according to
a request indicative of specifics of conversion that
25 is applied to the image data.

5 13. The electronic device as claimed in
claim 12, wherein said control unit selects one of
said conversion units according to the request so as
to make the selected one of said conversion units
convert the image data.

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14. The electronic device as claimed in
15 claim 12, wherein the request specifies a format of
the image data prior to conversion and a format of
the converted image data.

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15. The electronic device as claimed in
claim 1, wherein the image data is transferred at a
constant rate between said control unit and at least
25 one of said conversion units.

5 16. The electronic device as claimed in
claim 1, wherein each of said conversion units is a
chip.

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17. The electronic device as claimed in
claim 1, implemented on a printed circuit board that
is connectable to an upper-order apparatus.

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18. The electronic device as claimed in
20 claim 17, wherein the image data is received from
the upper-order apparatus, and the converted image
data is output to the upper-order apparatus.

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19. The electronic device as claimed in
claim 1, wherein said control unit is also
configured to convert the image data.

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20. An image forming apparatus,
10 comprising:

hardware resources configured to form
images;

a memory having a program stored therein
for causing said hardware resources to form the
15 images; and

an electronic device configured to receive
image data and convert the image data for outputting
therefrom, said electronic device including:

a plurality of conversion units configured
20 to convert the image data;

a control unit configured to control said
conversion units;

an image data transfer unit configured to
transfer the image data between said control unit
25 and at least one of said conversion units; and

a clock unit configured to provide synchronization between said control unit and at least one of said conversion units for transfer of the image data.

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21. The image forming apparatus as claimed
10 in claim 20, further comprising a conversion request generating unit which generates a conversion request, wherein said electronic device converts the image data in response to the conversion request.

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22. The image forming apparatus as claimed
in claim 21, further comprising a conversion-type
20 specifying unit which generates information about a format of the image data prior to conversion and a format of the image data after the conversion, said information being supplied to said conversion request generating unit.

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23. The image forming apparatus as claimed
5 in claim 22, wherein said conversion request
generating unit generates the conversion request
responsive to the information supplied from said
conversion-type specifying unit.

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24. The image forming apparatus as claimed
in claim 20, further comprising a memory-area
15 allocating unit which allocates a memory area in
which the image data to be converted by said
electronic device and the converted image data are
stored.

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25. A method of converting image data by
use of a plurality of conversion units configured to
25 convert the image data and a control unit configured

to control the conversion units, comprising the steps of:

notifying the control unit of a type of conversion that is to be performed with respect to
5 the image data;

selecting, by the control unit, one of the conversion units in response to the notified type of conversion;

supplying, from the control unit to the
10 selected one of the conversion units, a clock signal
that provides synchronization for transfer of the image data;

supplying, from the control unit to the selected one of the conversion units, a signal
15 indicative of a start of transfer of the image data;
and

transferring the image data from the control unit to the selected one of the conversion units.

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26. The method as claimed in claim 25,
25 further comprising the steps of:

transmitting, from the selected one of the conversion units to the control unit, a clock signal that provides synchronization for transfer of converted image data; and

5 transferring the converted image data from the selected one of the conversion units to the control unit.

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27. A method of converting image data by use of a plurality of conversion units configured to convert the image data, a control unit configured to 15 control the conversion units, and a conversion request generating unit configured to request conversion, comprising the steps of:

generating, by the conversion request generating unit, information about the type of 20 conversion that is to be performed with respect to the image data;

instructing, by the conversion request generating unit, the control unit to perform the conversion based on the information;

25 selecting, by the control unit, one of the

conversion units in response to the notified type of conversion;

supplying, from the control unit to the selected one of the conversion units, a clock signal
5 that provides synchronization for transfer of the image data;

supplying, from the control unit to the selected one of the conversion units, a signal indicative of a start of transfer of the image data;
10 and

transferring the image data from the control unit to the selected one of the conversion units.

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28. The method as claimed in claim 27,
further comprising a step of notifying, by the control unit, the conversion request generating unit
20 of a completion of the conversion of the image data.